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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/694,287	10/27/2003	Reiner Rygiel	21295.65 (H5680US)	2780
29127	7590	01/16/2007		
HOUSTON ELISEEVA 4 MILITIA DRIVE, SUITE 4 LEXINGTON, MA 02421			EXAMINER PRITCHETT, JOSHUA L	
			ART UNIT	PAPER NUMBER
			2872	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/694,287	RYGIEL, REINER	
	Examiner	Art Unit	
	Joshua L. Pritchett	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date: _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to Amendment filed December 1, 2006. Claims 1-13 have been amended as requested by the applicant.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 4, 5 and 7-13 rejected under 35 U.S.C. 103(a) as being unpatentable over Eastman (US 6,411,434) in view of Lannai (US 4,621,911).

Regarding claim 1, Eastman teaches a confocal microscope with a sample carrier (abstract) comprising a first coverslip (26) and a second coverslip (16) immovably secured in a frame and forming a cavity between them (col. 4 line 61 – col. 5 line 5). Eastman further teaches a medium uniformly filling in the cavity (col. 7 lines 32-37; Fig. 7). Although Eastman is silent as to the medium having approximately the same refractive index of the first and second coverslips, the refractive index of the Eastman medium must approximately match the refractive indices of the first and second coverslips because a significant difference between the refractive

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indices would cause reflection of light at the interface of the medium and the coverslip. Eastman lacks reference to the second coverslip including a mirror surrounding the sample region. Lannai teaches the use of a mirror (76) surrounding a sample region (Fig. 7). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the Eastman invention include the mirror of the Lannai invention for the purpose of efficiently passing the emitted fluorescence of the specimen (Lannai col. 9 lines 9-12).

Regarding claim 2, Eastman teaches the substrate of the coverslips being anisotropic or isotropic materials of approximately the same refractive index and that are transparent to the wavelengths used (Fig. 11). The coverslips must inherently be either anisotropic or isotropic.

Regarding claim 4, Eastman reference teaches the use of a sample as thin as possible (col. 2 lines 25-35).

Regarding claim 5, Eastman teaches the invention as claimed but lacks reference to the claimed wavelengths. Lannai teaches the mirror on the second coverslip reflective for light in a wavelength range of 300-1300 nm (col. 5 lines 58-60). Lannai teaches the mirror operating at a wavelength of 365 nm. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the Eastman invention include the mirror of the Lannai invention for the purpose of efficiently passing the emitted fluorescence of the specimen (Lannai col. 9 lines 9-12).

Regarding claim 7, Eastman teaches the invention as claimed but lacks reference to a dielectric mirror coating. Lannai teaches the mirror is made of a dielectric coating (claim 18). It would have been obvious to a person of ordinary skill in the art at the time the invention was

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made to have the Eastman invention include the mirror of the Lannai invention for the purpose of efficiently passing the emitted fluorescence of the specimen (Lannai col. 9 lines 9-12).

Regarding claims 8 and 10, Eastman teaches the use of a circular sample region (Fig. 1).

Regarding claim 9, Eastman teaches the use of an adhesive to secure portions of the coverslip together (col. 6 lines 40-50).

Regarding claims 11 and 12, Eastman teaches the invention as claimed but lacks reference to the claimed shape. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the shape of the coverslips be square, since it has been held that a mere change in shape of an element is generally recognized as being within the level of ordinary skill in art when the change in shape is not significant to the function of the combination. Further, one would have been motivated to select the shape of a square for the purpose of allowing the coverslips to be more easily held in place for examination.

Regarding claim 13, Eastman teaches the invention as claimed but lacks reference to the use of an interferometric fluorescence microscope. Lannai teaches the microscope is an interferometric fluorescence microscope (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Eastman reference used as an interferometric fluorescence microscope for the purpose of determining the emission spectrum of a sample.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eastman (US 6,411,434) in view of Lannai (US 4,621,911) as applied to claim 1 above, and further in view of Lakowicz (US 2002/0160400).

Eastman in combination with Lannai teaches the invention as claimed but lacks reference to the use of quartz and glycerol. Lakowicz teaches the use of quartz as a means to create the coverslips (Fig. 1A). Lakowicz teaches the use of glycerol as a means to fill the cavity of a microscope slide (para. 0092). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Eastman in combination with Lannai invention include the quartz coverslips and glycerol of Lakowicz for the purpose of efficiently transmitting light through the coverslips and protecting the sample.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eastman (US 6,411,434) in view of Lannai (US 4,621,911) as applied to claim 1 above, and further in view of Aagard (US 3,720,924).

Eastman in combination with Lannai teaches the invention as claimed including the use of a metal mirror (para. 0019) but lacks reference to the use of aluminum in the mirror. Aagard teaches the use of aluminum to create a mirror in a microscope (col. 9 lines 60-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Eastman in combination with Lannai mirror made of aluminum as taught by Aagard for the purpose of reflecting light in the visible wavelength range.

Response to Arguments

Applicant's arguments filed December 1, 2006 have been fully considered but they are not persuasive.

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Applicant argues Eastman fails teach the first and second coverslips are immovably secured in a frame. The claim limitations have been amended and no longer require a frame. Further, the Eastman reference teaches the coverslips are sealingly engaged. The examiner interprets "sealingly engaged" as a functional equivalent of "~~immovable~~," since moving a sealed element would likely break the seal and thus the element would no longer be sealingly engaged. *1/18/07*

Applicant argues the Eastman reference fails to teach the cavity is uniformly filled by the medium. The applicant does not require the entire open area between the coverslips be defined as a cavity. The cavity in Eastman is element 27. A fluid will inherently attempt to fill a cavity uniformly limited only by surface tension of the fluid creating a meniscus. None of the fluids disclosed by the applicant in the specification have a zero surface tension therefore the examiner interprets uniformly to be within the ability of a fluid to flow to the bottom of a vessel disregarding the meniscus created by surface tension. Therefore the fluid of Eastman fills the cavity uniformly in a manner that satisfies the claim limitations.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO


MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318. The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A. Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


DREWA. DUNN
SUPERVISORY PATENT EXAMINER

Joshua L Pritchett 
Examiner
Au 2872